### Fall 2016 Levee Maintenance Deficiency Summary Report Overall LMA & Unit Ratings, including DWR Erosion Survey

### San Joaquin River Basin

RD0001 Reclamation District No. 0001 Union	Overall LMA Rating	Total LMA Miles						
Island	M	1.14						
Rated Item		Maintena	nce Deficiancy		Enforc	ement	Design 8 Obsole	
Rateu Item	M Miles	U Miles	M + 4U Miles	Threshold %	M Miles	U Miles	M Miles	U Miles
Earthen Levee								
Animal Control		0.04	0.16	14.06%				
Slope Stability	0.02		0.02	1.76%				
Erosion / Bank Caving	0.01		0.01	0.88%				
Flood Preparedness & Training	0.01		0.01	0.88%				
Supplemental								
DWR Erosion Survey	0.01		0.01	0.88%				
DWR UCIP Field Study					0.01			
LMA Totals:	0.05	0.04	0.21	18.45%	0.01	0.00	0.00	0.00
Unit No. 01 Old River RB	Overall Unit Rating	Total Unit Miles						
RD0001	M	1.14						
Rated Item		Maintena	nce Deficiancy		Enforc	ement	Design 8 Obsole	
Rated item	M Miles	U Miles	M + 4U Miles	Threshold %	M Miles	U Miles	M Miles	U Miles
Earthen Levee								
Animal Control		0.04	0.16	14.06%				
Slope Stability	0.02		0.02	1.76%				
Erosion / Bank Caving	0.01		0.01	0.88%				
Supplemental								
DWR Erosion Survey	0.01		0.01	0.88%				
DWR UCIP Field Study					0.01			
Unit Totals:	0.04	0.04	0.20	17.57%	0.01	0.00	0.00	0.00

### **LMA District Cover Sheet**

### Fall 2016 Levee Inspection Results

### Reclamation District No. 0001 Union Island

	Spring (March - May)	Summer ** (June - August)	Fall (September - November)	Winter ** (December - February)				
† Overall LMA Rating (Fall Only)			M					
** Non-receipt of Summer or Winter Inspection Reports may effect overall annual rating.								

† SPRING INSPECTIONS: Overall maintenance ratings are not determined for the spring inspection results. Individual maintenance deficiencies are rated using the same criteria in the spring and in the fall.

FALL INSPECTIONS: The overall maintenance rating shown above is based on operation and maintenance deficiencies identified within the attached unit inspection reports. This rating is not intended to be an indiction of risk.

Comments

### **Unit Cover Sheet**

### Fall 2016 Levee Inspection Results

### Reclamation District No. 0001 Union Island

Waterway	Bank	Unit Miles
Unit No. 01 Old River	Right	1.14

	Spring (March - May)	Summer (June - August)	(September - November) Fall	Winter (December - February)
Unit Maintenance Rating (Fall Only)			M	
Date of Inspection	3/15/2016 - 3/15/2016		10/13/2016 - 10/13/2016	
DWR Inspector	Maksim Khashchuk		Maksim Khashchuk	
Accompanied By				

### Summer & Winter Inspections

The Local Maintaining Agency (LMA) is responsible for summer and winter inspections. The LMA is required to submit a report regarding summer and winter inspections to the California Department of Water Resources (DWR).

DWR must be informed on the:

- a) completion of the inspection
- b) any changes other than the results of normal maintenance
- c) corrections to deficiencies noted in this report

If additional items are noted, further documentation of those items must also be submitted.

The LMA should submit this information to DWR using the LMA web application tool available at:

### http://cdec.water.ca.gov/lma.html

If the LMA is unable to submit information on this webpage, please contact DWR for assistance.

The LMA should submit the information and any associated documentation by September 30 for summer inspections and March 31 for winter inspections.

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### Flood Control Project Maintenance Levee Inspections

### Levee Inspection Report By Mile - Fall 2016

### **Reclamation District No. 0001 Union Island**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Old River	Right	1.14	10/13/2016 10/13/2016	Maksim Khashchuk

		Rating **						
LM Start		Issue No.		6				
LM End		Issue Type +	Ма	Location *		N/A		
Category	Earthen L	evee		GPS La	atitud	le/Longitude		
Calegory				Start		End		
Item	Flood Preparedness & Training				0		0	
item				٥		0		
DWR ID	DWR_RD0	001_01_s _ 201	3_6					
		Comn	nent Coc	de				
Inspector Comment								
The LMA has not attended a flood fight training class in the past few years. They do have an emergency plan.								

No Photos

LM Start		Raung	А	issue ivo.		8	
LM End		Issue Type +	Ma	Location *		N/A	
Category Earthen Levee				GPS La	atitud	e/Longitude	
				Start		End	
Item		y Supplies &			0		0
item	Equipmen	it			0		0
DWR ID	DWR_RD0	001_01_s _ 201	3_8				
		Comn	nent Coc	de			

No Photos

Inspector Comment

The LMA has emergency supplies on-site.

LM Start		Rating **	Α	Issue No.		9		
LM End		Issue Type +	Ма	Location *		N/A		
Category	Earthen L	evee		GPS La	atitud	le/Longitude		
Calegory				Start		End		
Item		s & Maintena	nce		0		0	
item	Manuals			٥		0		
DWR ID	DWR_RD0	001_01_s _ 201	3_9					
		Comn	nent Cod	de				
Inspector Comment								
The LMA has a copy of the O&M Manual available at the office.								

No Photos

* Location	** Rating		+ Issue Type
LS : Land Side N/A : Not Applicable	A : Acceptable	N : Not Inspected/Rated	Ma : Maintenance Deficiancy
WS: Water Side	M : Minimally Acceptable	C : Corrected	Ob : Design & System Obsolescence
CR · Crown	U : Unacceptable	A/W · Acceptable but Monitor & Maintain	En : Enforcement

### Levee Inspection Report By Mile - Fall 2016

### **Reclamation District No. 0001 Union Island**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Old River	Right	1.14	10/13/2016 10/13/2016	Maksim Khashchuk

LM Start	0.00	Rating **	М	Issue No.		1
LM End	0.00	Issue Type +	Ma	Location *		WS
Category	Suppleme	ental		GPS La	atitud	e/Longitude
Calegory				Start		End
Item	DWR Eros	sion Survey		37.8223	806°	37.822306°
item				-121.3753	04°	-121.375304°
DWR ID						
		Comn	nent Cod	de		
Inspector Comment						
07/25/2016: No significant change observed.						
06/25/2015: No significant change observed.						
07/02/2014: No significant change observed						

06/25/2015: No significant change observed. 07/02/2014: No significant change observed. 08/20/2013: No significant change at this site.

08/07/2012: The erosion is at the confluence of Old River and one of its tributary. [2016 Site ID:RD0001U01RM31.4]

 LM Start
 0.00
 Rating \*\*
 M
 Issue No.
 1 (cont)

 LM End
 0.00
 Issue Type +
 Ma
 Location \*
 WS



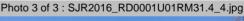
Upstream view of the erosion.

### Photo 2 of 3: SJR2016\_RD0001U01RM31.4\_2.jpg



Close view of the erosion.

LM Start	0.00	Rating **	М	Issue No.	1 (cont)
LM End	0.00	Issue Type +	Ma	Location *	WS





Front view of the site. Note the large tree on site.

* Location	** Rating		+ Issue Type
LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown	A : Acceptable M : Minimally Acceptable U : Unacceptable	N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain	Ma : Maintenance Deficiancy Ob : Design & System Obsolescence En : Enforcement

### Levee Inspection Report By Mile - Fall 2016

### Reclamation District No. 0001 Union Island

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Old River	Right	1.14	10/13/2016 10/13/2016	Maksim Khashchuk

LM Start	0.17	Rating **	N	Issue No.		12	
LM End	0.17	Issue Type +	Ma	Location *		WS	
Category	evee	GPS Latitude/Longitude					
Calegory	Category					End	
Item	Trim / Thi	n Trees		37.8213	76°	37.821376°	
пеш				-121.3780	44 °	-121.378044°	
DWR ID	DWR ID DWR_RD0001_01_s _ 2014_12						
Comment Code							

T5: Tree stumps.

### Inspector Comment

Remove stump when it becomes rotted to prevent possible seepage path along the roots.



View of the tree stump on the waterside levee slope.

LM Start	0.24	Rating **	A/W	Issue No.		11	
LM End	0.24	Issue Type +	Ма	Location *		CR	
Category Earthen Levee				GPS Latitude/Longitude			
Calegory	ыу			Start		End	
Item	Encroach	ments		37.8203	62 °	37.820362°	
пеш				-121.3783	59°	-121.378359°	
DWR ID	DWR ID DWR_RD0001_01_s _ 2014_11						

Comment Code MA: Material

### Inspector Comment

Stockpiled riprap on levee crown. Keep the stockpile so that a vehicle could maneuver around the pile to facilitate visibility and access of the levee.

Photo 1 of 1 : FA_2016_RD0001_23_11_20160914_00008.jpg
05/07/9044

View of the riprap stockpiled on the levee crown.

LM Start	0.44	Rating **	U	Issue No.		14	
LM End	0.44	Issue Type +	Ma	Location *	LS		
Category Earthen Levee				GPS Latitude/Longitude			
Calegory	Category			Start		End	
Item	Animal Co	ontrol		37.81889	98°	37.818898°	
item					32°	-121.380332°	
DWR ID DWR_RD0001_01_s _ 2016_14							
	Comment Code						

A1: Exterminate rodents and backfill and compact or grout burrows.

### Inspector Comment

Active rodent den a size of a coyote or fox.

# Photo 1 of 1: FA\_2016\_RD0001\_23\_14\_20160914\_00010.jpg



View of the large rodent hole on the landside levee slope.

Location + Issue Type Ma : Maintenance Deficiancy N/A: Not Applicable LS: Land Side : Acceptable : Minimally Acceptable N: Not Inspected/Rated WS: Water Side C : Corrected Ob : Design & System Obsolescence U : Unacceptable A/W: Acceptable but Monitor & Maintain En: Enforcement

### Levee Inspection Report By Mile - Fall 2016

### Reclamation District No. 0001 Union Island

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Old River	Right	1.14	10/13/2016 10/13/2016	Maksim Khashchuk

LM Start	0.45	Rating **	U	Issue No.	10		
LM End	0.45	Issue Type +	Ma	Location *	LS		
Category	Earthen L	evee		GPS La	atitud	le/Longitude	
Calegory				Start		End	
Item	Animal Control			37.8187	53°	37.818753°	
пеш				-121.380249 °		-121.380249°	
DWR ID	DWR_RD0	001_01_s _ 201	6_10				
		Comn	nent Cod	de			
A3 : No rodents visible, but rodent burrows visible; need to backfill and compact or grout burrows.							
Inspector Comment							

Backfill and compact levee slope with acceptable levee fill.



View of the large rodent hole on the landside levee slope.

Photo 1 of 1: FA\_2016\_RD0001\_23\_5\_20160914\_00005.jpg

LM Start	0.51	Rating **	М	Issue No.		5	
LM End	0.51	Issue Type +	Ma	Location *		LS	
Category Earthen Levee				GPS Latitude/Longitude			
Category				Start		End	
Item	Slope Sta	bility		37.8180	03°	37.818003°	
пеш				-121.3798	45°	-121.379845°	
DWR ID DWR_RD0001_01_f _ 2015_5							
Comment Code							

S1: Repair slope instability.

### Inspector Comment

About a 1 ft. vertical cut is observed at the landside levee toe. Repair the landside levee toe per O&M standards.

# 06/92/2915

View of the vertical cut at the landside levee toe.

LM Start	0.52	Rating **	М	Issue No.		7	
LM End	0.52	Issue Type +	Ma	Location *		LS	
Catagory	evee	GPS Latitude/Longitude					
Calegory	Category			Start		End	
Item	Erosion / Bank Caving			37.817825°		37.817825°	
item				-121.3798	11 °	-121.379811°	
DWR ID	DWR_RD0	001_01_s _ 201	6_7				
Comment Code							
E2 : Sched	dule repair	of erosion site	e prior to	the next in	spe	ction.	

Inspector Comment



View of the erosion on the landside levee slope.

\*\* Rating
LS: Land Side N/A: Not Applicable
WS: Water Side
CR: Crown

\*\* Rating
A: Acceptable
N: Not Inspected/Rated
N: Not Inspected/Rated
C: Corrected
C: Corrected
M: Minimally Acceptable
C: Corrected
M: Enforcement
En: Enforcement

### Levee Inspection Report By Mile - Fall 2016

### **Reclamation District No. 0001 Union Island**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Old River	Right	1.14	10/13/2016 10/13/2016	Maksim Khashchuk

		D :: ++					
LM Start	0.67	Rating **	U	Issue No.		15	
LM End	0.67	Issue Type +	Ma	Location *		LS	
Category	Earthen L	evee		GPS La	atitud	e/Longitude	
Category				Start		End	
Item	Animal Co	ontrol		37.8170	47°	37.817047°	
item				-121.382342 °		-121.382342 °	
DWR ID DWR_RD0001_01_f _ 2016_15							
		Comn	nent Cod	de			
A1 : Exterr	ninate rod	ents and back	fill and o	compact or	grou	t burrows.	
Inspector Comment							
Burrow entrence is about 18 inches by 10 inches.							



View of the large rodent burrow in the landside levee slope.

LM Start	0.76	Rating **	U	Issue No.	4		
LM End	0.76	Issue Type +	Ма	Location *	LS		
Category Earthen Levee			GPS Latitude/Longitude				
Category				Start		End	
Animal Control		37.81588	1°	37.815881 °			
nem				-121.38270	٥ 4	-121.382704°	
DWR ID DWR_RD0001_01_f _ 2015_4							
Comment Code							

### A1: Exterminate rodents and backfill and compact or grout burrows.

### Inspector Comment

Large burrow in the landside levee slope. Possible fox den. Cobwebs are visible in the hole. Fall 2016.

### Photo 1 of 1 : FA\_2016\_RD0001\_23\_4\_20160914\_00004.jpg



View of a large rodent hole on the landside levee slope.

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### **Flood Control Project Maintenance** Levee Inspections

### Levee Inspection Report By Mile - Fall 2016

### Reclamation District No. 0001 Union Island

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Old River	Right	1.14	10/13/2016 10/13/2016	Maksim Khashchuk

LM Start	0.85	Rating **	М	Issue No.	17		
LM End	0.85	Issue Type +	En	Location *	LS		
Category Supplemental				GPS Latitude/Longitude			
				Start		End	
DWR UCIP Field Study			37.81460	)1 °	37.814601°		
item				-121.382509 °		-121.382509°	
DWR ID							
Comment Code							

## Inspector Comment

FS\_ID:41600 DS\_ID:22691 EP\_NO: N/A

Repair Type: Non-Urgent Crossing Status: Found

UCIP Comments: - 2" electric conduit on WS- pipe exposed on both sides.- power pole on LS. - erosion on WS hinge near walkway. FIELD\_STRUCT\_DESC: 14-inch pipe and 2-inch electric conduit through the levee, 6.0 feet below the crown, pump on pile structure in the stream, air valve on the landward shoulder, 30-inch concrete standpipe on the landward toe. O&M Manual LSJR 8, 1968 FS Date: 9/12/2013

Rating \*\* Issue No. LM Start 0.85 17 (cont) 0.85 Issue Type + En Location ' LS LM End



WS view: exposed pipe, walkway, and pump on pile structure. Soil erosion on levee hinge near walkway.

# Photo 2 of 2: UCIP\_FA\_2016\_41600\_36003.jpg



WS view: exposed pipe, walkway, and electric conduit under walkway. Rock revetment on lower levee slope.

### **Levee Inspection Report By Mile - Fall 2016**

### **Reclamation District No. 0001 Union Island**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Old River	Right	1.14	10/13/2016 10/13/2016	Maksim Khashchuk

LM Start	1.08	Rating **	М	Issue No.	3		
LM End	1.08	Issue Type +	Ma	Location *	LS		
Earthen Levee				GPS Latitude/Longitude			
Category				Start		End	
Slope Stability			37.812023°		37.812023°		
item				-121.383961 °		-121.383961 °	
DWR ID	WR ID DWR_RD0001_01_s _ 2016_3						
Comment Code							
S3 : Repair the levee slope damaged by vehicle traffic and prevent access where possible.							
Inspector Comment							
Repair slope damaged by vehicle by placing and compacting acceptable levee material.							



View of the landside slope damaged by farm equipment.